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EXAMINER	
DAVIS, CYNTHIA L	

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/851,283	DURINOVIC-JOHRI ET AL.	
	Examiner	Art Unit	
	Cynthia L. Davis	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11/16/2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 3/1/05
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Response to Arguments

1. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection. The only added limitation, that the switch operates based solely upon congestion within the.router, is rejected over Masuda in view of the applicant's disclosure.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-21 are rejected under 35 USC 112 2nd paragraph. See MPEP 2106(II)(C): Language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation. The following are examples of language that may raise a question as to the limiting effect of the language in a claim:

(B) "adapted to" or "adapted for" clauses

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masuda in view of Rochberger and applicant's disclosure.

Regarding claim 1, a switch, upon detection of congestion on one of the output ports, for outputting the eligible data packet of a plurality of packets from a primary output path of the one of the output ports corresponding to a destination address of the data to be output, to an overflow path for the destination address is disclosed in Masuda, figure 1, element 18 and column 4, lines 4-12. A memory adapted for storing an eligibility marker, the eligibility marker, wherein the eligibility marker is indicative that a data packet of a plurality of data packets is eligible for overflow routing based upon a network policy and at least one of a source port ID, a source IP address, and an intended packet destination address, wherein not all data packets from the plurality of data packets are eligible for overflow routing, and detection the eligibility marker, are missing from Masuda. However, Rochberger discloses in column 11, lines 46-48, a router storing eligibility for rerouting that is based on QoS, which is based upon the destination address. It would have been obvious to one skilled in the ad at the time of the invention to base eligibility for rerouting on QOS in the system of Masuda. The motivation would be to reroute higher priority traffic first, to ensure its particular guaranteed QoS. Said switch operated based upon congestion occurring only in the router is not specifically disclosed in Masuda or Rochberger. However, Masuda does disclose monitoring output port congestion status (which would be congestion occurring within the switch) in column 5, lines 52-54. Further, Applicant discloses in paragraph 5 of the instant specification that there is a direct relationship between congestion outside the router and congestion in the router; congestion outside the router causes the transmit buffer on that link to back up and eventually become full. It would have been

obvious to one skilled in the art at the time of the invention to operate the switch based upon congestion occurring in the router. The motivation would be to use the congestion information collected by Masuda to optimally route packets to avoid the congested port and links.

Regarding claim 2, a congestion detector adapted for detecting when the congestion has abated is disclosed in Masuda, figure 1, element 15. A switch adapted for further switching data packets corresponding to the destination address of the eligible data packet from the overflow path back to the primary output path corresponding to the destination address is disclosed in Masuda, figure 1, element 18, and column 5, lines 46-47 (the path selection unit switches the optimum path on a real time basis, so that when the congestion status monitor detects that congestion has abated, the path selection unit will switch back to the original optimum path).

Regarding claim 3, a memory adapted for storing a forwarding table in the router is disclosed in Masuda figure 1, elements 131 and 132. The forwarding table having entries respectively corresponding to destination addresses in the network and identifying at least two output paths from the router for at least one of the destination addresses to enable overflow routing, one of the at least two output paths being identified as a corresponding primary path and other of the at least two output paths being identified as overflow paths is not specifically disclosed in Masuda. However, the H/W table of Masuda holds whichever optimum path has been selected based on the instant congestion levels, sometimes it will be the usual optimum path, sometimes it will be another path, depending on the current congestion status in the network. See

Masuda, column 8, lines 4-7. it would have been obvious to one skilled in the art at the time of the invention to have a table holding all of the possible primary and backup paths that are used in Masuda. The motivation would be to compile the primary and overflow path data in one place.

Regarding claim 4, a processor adapted for determining, upon detection of congestion on the one of the output ports, on which one of the overflow paths to switch the eligible data packet based upon an amount of data packets currently assigned to be output on each of the overflow paths is disclosed in Masuda, figure 1, element 12 and column 8, lines 30-36 (if buffer overflow occurs, a portion of the data will be temporarily rerouted to another path not containing any congested links).

Regarding claim 5, the processor adapted for determining an amount of data packets currently assigned to be output on each of the overflow paths; determining a selected overflow paths from the overflow paths, the selected overflow path assigned has a least amount of the amount of data packets currently assigned to be output on each of the overflow paths, and assigning the eligible data packet to the selected overflow path is disclosed in Masuda, figure 1, element 12 and column 8, lines 30-36 (if buffer overflow occurs, a portion of the data will be temporarily rerouted to another path not containing any congested links).

Regarding claim 6, a congestion monitor adapted for monitoring receipt of a congestion signal indicative of congestion associated with an output port of the router is disclosed in Masuda, figure 1, element 14. A switch, adapted for switching, for all destination addresses in the forwarding table affected by the detection of congestion

and eligible for overflow routing, from the primary path to a selected one of the plurality of overflow paths for transmitting the data is disclosed in figure 1, element 18 and column 4, lines 4-12. A memory adapted for for storing an eligibility marker, the eligibility marker based upon a network policy and at least one of a source port ID, a source IP address, and an intended destination address, wherein the eligibility marker identifies destination addresses that are eligible for overflow routing, wherein not all destination addresses are eligible for overflow routing, is missing from Masuda. However, Rochberger discloses in column 11, lines 46-48, a router storing eligibility for rerouting that is based on QoS, which is based upon the destination address. It would have been obvious to one skilled in the art at the time of the invention to base eligibility for rerouting on QOS in the system of Masuda. The motivation would be to reroute higher priority traffic first, to ensure its particular guaranteed QoS. Said switch operated based upon congestion occurring only in the router is not specifically disclosed in Masuda or Rochberger. However, Masuda does disclose monitoring output port congestion status (which would be congestion occurring within the switch) in column 5, lines 52-54. Further, Applicant discloses in paragraph 5 of the instant specification that there is a direct relationship between congestion outside the router and congestion in the router; congestion outside the router causes the transmit buffer on that link to back up and eventually become full. It would have been obvious to one skilled in the art at the time of the invention to operate the switch based upon congestion occurring in the router. The motivation would be to use the congestion information collected by Masuda to optimally route packets to avoid the congested port and links.

Regarding claim 7, a processor adapted for determining when the congestion has abated based upon status of the congestion signals is disclosed in figure 1, element 14 of Masuda. A switch switching, for all of the destination addresses in the forwarding table switched to overflow routing, from the overflow path back to the primary path when the congestion has abated is disclosed in Masuda, figure 1, element 18 and column 5, lines 46-47 (the path selection unit switches the optimum path on a real time basis, so that when the congestion status monitor detects that congestion has abated, the path selection unit will switch back to the original optimum path).

Regarding claim 8, a memory adapted for storing a forwarding table in the router is disclosed in Masuda, figure 1, elements 131 and 132. The forwarding table having entries respectively corresponding to destination addresses in the network and identifying at least two output paths from the router for at least one of the destination addresses to enable overflow routing, one of the plurality of output paths being identified as a corresponding primary path and each remaining output path of the plurality of output paths being identified as overflow paths is not specifically disclosed in Masuda. However, the H/W table of Masuda holds whichever optimum path has been selected based on the instant congestion levels, sometimes it will be the usual optimum path, sometimes it will be another path, depending on the current congestion status in the network. See Masuda, column 8, lines 4-7. it would have been obvious to one skilled in the art at the time of the invention to have a table holding all of the possible primary and backup paths that are used in Masuda. The motivation would be to compile the primary and overflow path data in one place. A congestion monitor adapted for monitoring

receipt of congestion signals indicative of congestion associated with an output port of the router is disclosed in Masuda, figure 1, element 14. A switch for adapted for switching, data packets associated with the determined destination address from the primary path to a selected overflow path is disclosed in Masuda, figure 1, element 18 and column 4, lines 4-12. A memory for storing an eligibility marker, the eligibility marker based upon a network policy and at least one of a source port ID, a source IP address, and a packet destination address, wherein the eligibility marker identifies destination addresses that are eligible for overflow routing, wherein not all destination addresses are eligible for overflow routing, is missing from Masuda. However, Rochberger discloses in column 11, lines 46-48, a router storing eligibility for rerouting that is based on QoS, which is based upon the destination address. It would have been obvious to one skilled in the art at the time of the invention to base eligibility for rerouting on QOS in the system of Masuda. The motivation would be to reroute higher priority traffic first, to ensure its particular guaranteed QoS. Said switch operated based upon congestion occurring only in the router is not specifically disclosed in Masuda or Rochberger. However, Masuda does disclose monitoring output port congestion status (which would be congestion occurring within the switch) in column 5, lines 52-54. Further, Applicant discloses in paragraph 5 of the instant specification that there is a direct relationship between congestion outside the router and congestion in the router; congestion outside the router causes the transmit buffer on that link to back up and eventually become full. It would have been obvious to one skilled in the art at the time of the invention to operate the switch based upon congestion occurring in the router. The motivation

would be to use the congestion information collected by Masuda to optimally route packets to avoid the congested port and links.

Regarding claim 9, a processor adapted for determining when the congestion occurring within the router has abated based upon status of the congestion signals is disclosed in Masuda, figure 1, element 14. A switch adapted for switching data packets associated with the determined destination address from the selected overflow path back to the primary path when the congestion occurring within the router has abated is disclosed in figure 1, element 18 and column 5, lines 46-47 (the path selection unit switches the optimum path on a real time basis, so that when the congestion status monitor detects that congestion has abated, the path selection unit will switch back to the original optimum path).

Regarding claim 10, a router with at least one input port and at least one output port is disclosed in Masuda, figure 1. A memory for storing a forwarding table is disclosed in figure 1, elements 131 and 132. The forwarding table having entries respectively corresponding to destination addresses in the network and identifying at least two output paths from the router for at least one of the destination addresses to enable overflow routing, one of the at least two output paths being identified as a corresponding primary path and other of the at least two output paths being identified as overflow paths is not specifically disclosed in Masuda. However, the H/W table of Masuda holds whichever optimum path has been selected based on the instant congestion levels, sometimes it will be the usual optimum path, sometimes it will be another path, depending on the current congestion status in the network. See Masuda,

column 8, lines 4-7. it would have been obvious to one skilled in the art at the time of the invention to have a table holding all of the possible primary and backup paths that are used in Masuda. The motivation would be to compile the primary and overflow path data in one place. A controller adapted for detecting packet destination addresses comprised in data packets to be output from the router, monitoring congestion status of the at least one output port, and controls the output of the data from the at least one output port based upon the destination address for the data and congestion status of the router is disclosed in Masuda, figure 1, elements 2, 14, and 18. A memory for storing an eligibility marker based upon a network policy and at least one of a source port ID, a source IP address, and a destination address, wherein the eligibility marker identifies destination addresses that are eligible for overflow routing, wherein not all destination addresses are eligible for overflow routing, and the controller outputting the data based on the eligibility marker, is missing from Masuda. However, Rochberger discloses in column 11, lines 46-48, a router storing eligibility for rerouting that is based on QoS, which is based upon the destination address. It would have been obvious to one skilled in the art at the time of the invention to base eligibility for rerouting on QOS in the system of Masuda. The motivation would be to reroute higher priority traffic first, to ensure its particular guaranteed QoS. A switch adapted for switching upon detection of congestion for outputting the eligible data packet associated with an eligible destination address from a primary output path of the one of the output ports corresponding to a destination address of the data to be output, to an overflow path for the destination address is disclosed in Masuda, figure 1, element 18 and column 4, lines

4-12. Said switch operated based upon congestion occurring only in the router is not specifically disclosed in Masuda or Rochberger. However, Masuda does disclose monitoring output port congestion status (which would be congestion occurring within the switch) in column 5, lines 52-54. Further, Applicant discloses in paragraph 5 of the instant specification that there is a direct relationship between congestion outside the router and congestion in the router; congestion outside the router causes the transmit buffer on that link to back up and eventually become full. It would have been obvious to one skilled in the art at the time of the invention to operate the switch based upon congestion occurring in the router. The motivation would be to use the congestion information collected by Masuda to optimally route packets to avoid the congested port and links.

Regarding claim 11, the controller comprises the switch is disclosed in Masuda, figure 1, elements 14 and 11, and column 4, lines 4-12.

Regarding claim 12, the controller is adapted for detecting when the congestion occurring only within the router has abated is disclosed in Masuda, figure 1, element 14. Switching the output of the data packets comprising the eligible destination address from the overflow path back to the primary path is disclosed in figure 1, element 11 and column 5, lines 46-47 (the path selection unit switches the optimum path on a real time basis, so that when the congestion status monitor detects that congestion has abated, the path selection unit will switch back to the original optimum path).

Regarding claim 13, the eligibility marker supplies identification information to the controller, and wherein the controller stores the identification information in the

forwarding table is missing from Masuda. However, Rochberger discloses in column 11, lines 46-48, a router storing eligibility for rerouting that is based on QoS. It would have been obvious to one skilled in the art at the time of the invention to store the Qos-based rerouting information in the routing tables in the system of Masuda. The motivation would be to keep the rerouting information in a convenient place in the router.

Regarding claim 14, an overflow route calculator that determines the selected overflow path disclosed in Masuda, figure 1, element 11.

Regarding claim 15, an overflow route populator that populates the forwarding table is disclosed in figure 1, element 11, which writes the current optimum path to the H/W table, figure 1, element 132 .

Regarding claim 16, a router comprising at least one input port and at least one output port is disclosed in Masuda, figure 1. Means for storing a forwarding table is disclosed in Masuda, figure 1, elements 131 and 132. The forwarding table having entries respectively corresponding to destination addresses in the network and identifying at least two output paths from the router for at least one of the destination addresses to enable overflow routing, one of the at least two output paths being identified as a corresponding primary path and other of the at least two output paths being identified as overflow paths is not specifically disclosed in Masuda. However, the H/W table of Masuda holds whichever optimum path has been selected based on the instant congestion levels, sometimes it will be the usual optimum path, sometimes it will be another path, depending on the current congestion status in the network. See Masuda, column 8, lines 4-7. it would have been obvious to one skilled in the art at the

time of the invention to have a table holding all of the possible primary and backup paths that are used in Masuda. The motivation would be to compile the primary and overflow path data in one place. Means for identifying a packet destination addresses that is eligible for overflow routing is disclosed in is disclosed in Masuda, column 10, lines 40-55 (based on priority and costs associated with each link, some addresses may not be eligible for rerouting). Storing the identification information in the appropriate entries of the forwarding table based upon the destination addresses is disclosed in Masuda, figure 1, element 11, which writes to the H/W table, figure 1, element 132.

Determining the at least one overflow path for each of the destination addresses identified as being eligible for overflow routing, and storing, in the forwarding table, information for the at least one overflow path for each of the destination addresses eligible for overflow routing is disclosed in Masuda, figure 1, element 11, and column 4, lines 4-12 (there is a set of path candidates which can be used for overflow routing). An eligibility marker stored in the router, the eligibility marker based upon a network policy and at least one of a source port ID, a source IP address, and a destination address, wherein the eligibility marker identifies destination addresses that are eligible for overflow routing, wherein not all destination addresses are eligible for overflow routing, is missing from Masuda. However, Rochberger discloses in column 11, lines 46-48, a router storing eligibility for rerouting that is based on QoS, which is based upon the destination address. It would have been obvious to one skilled in the art at the time of the invention to base eligibility for rerouting on QOS in the system of Masuda. The motivation would be to reroute higher priority traffic first, to ensure its particular

guaranteed QoS. A switch adapted for switching upon detection of congestion for outputting the eligible data packet associated with an eligible destination address from a primary output path of the one of the output ports corresponding to a destination address of the data to be output, to an overflow path for the destination address is disclosed in Masuda, figure 1, element 18 and column 4, lines 4-12. Said switch operated based upon congestion occurring only in the router is not specifically disclosed in Masuda or Rochberger. However, Masuda does disclose monitoring output port congestion status (which would be congestion occurring within the switch) in column 5, lines 52-54. Further, Applicant discloses in paragraph 5 of the instant specification that there is a direct relationship between congestion outside the router and congestion in the router; congestion outside the router causes the transmit buffer on that link to back up and eventually become full. It would have been obvious to one skilled in the art at the time of the invention to operate the switch based upon congestion occurring in the router. The motivation would be to use the congestion information collected by Masuda to optimally route packets to avoid the congested port and links.

Regarding claim 17, means arranged to detect a destination address is disclosed in figure 1, element 2. Monitoring congestion status of the at least one output port is disclosed in figure 1, element 14. Controlling the output of the data from the at least one output port based upon the destination address for the data, the information in the forwarding table corresponding to the destination address, and congestion status of the router is disclosed in figure 1, elements 11 and 18, and column 4, lines 4-12.

Regarding claim 18, an apparatus comprising at least one input port and at least one output port is disclosed in Masuda, figure 1. A memory for storing a forwarding table is disclosed in Masuda, figure 1, elements 131 and 132. The information in the routing table together with the tree table make up a forwarding table for the network, containing information regarding destination addresses in the network (column 5, lines 36-7), and identifying at least two output paths from the router for at least some of the destination addresses (the H/W table holds whichever optimum path has been selected based on the instant congestion levels, sometimes it will be the usual optimum path, sometimes it will not. Masuda, column 8, lines 4-7). A controller that detects a destination address for data to be output from the apparatus, monitors congestion status of the at least one output pod, and controls the output of the data from the at least one output port based upon the destination address for the data and congestion status of the apparatus is disclosed in Masuda, figure 1, elements 2, 14, and 18, and column 4, lines 4-12. A memory for storing an eligibility marker based upon a network policy and at least one of a source port ID, a source IP address, and a destination address, wherein the eligibility marker identifies destination addresses that are eligible for overflow routing, wherein not all destination addresses are eligible for overflow routing, and the controller outputting the data based on the eligibility marker, is missing from Masuda. However, Rochberger discloses in column 11, lines 46-48, a router storing eligibility for rerouting that is based on QoS, which is based upon the destination address. It would have been obvious to one skilled in the art at the time of the invention to base eligibility for rerouting on QOS in the system of Masuda. The motivation would

be to reroute higher priority traffic first, to ensure its particular guaranteed QoS. A switch adapted for switching upon detection of congestion for outputting the eligible data packet associated with an eligible destination address from a primary output path of the one of the output ports corresponding to a destination address of the data to be output, to an overflow path for the destination address is disclosed in Masuda, figure 1, element 18 and column 4, lines 4-12. Said switch operated based upon congestion occurring only in the router is not specifically disclosed in Masuda or Rochberger. However, Masuda does disclose monitoring output port congestion status (which would be congestion occurring within the switch) in column 5, lines 52-54. Further, Applicant discloses in paragraph 5 of the instant specification that there is a direct relationship between congestion outside the router and congestion in the router; congestion outside the router causes the transmit buffer on that link to back up and eventually become full. It would have been obvious to one skilled in the art at the time of the invention to operate the switch based upon congestion occurring in the router. The motivation would be to use the congestion information collected by Masuda to optimally route packets to avoid the congested port and links.

Regarding claim 19, a congestion monitor for monitoring congestion status on each output port of the router wherein the congestion status is one of a plurality of levels of congestion is disclosed in Masuda, figure 1, element 14. A congestion detector for detecting a level of congestion from the plurality of levels of congestion on at least one output port of the router is disclosed in Masuda, figure 1, element 15. A processor for determining an amount of data to be overflowed based upon the level of congestion and

for switching, upon detection of the one of the plurality of levels of congestion on the at least one output pod, the amount of data to be overflowed from a primary output path of the at least one output port corresponding to a destination address of the data to be output, to an overflow path for the destination address is disclosed in Masuda, figure 1, element 18 and column 8, lines 30-36 (if buffer overflow occurs, a portion of the data will be temporarily rerouted to another path not containing any congested links). A memory for storing an eligibility marker based upon a network policy and at least one of a source port ID, a source IP address, and a destination address, wherein the eligibility marker identifies destination addresses that are eligible for overflow routing, wherein not all destination addresses are eligible for overflow routing, and the controller outputting the data based on the eligibility marker, is missing from Masuda. However, Rochberger discloses in column 11, lines 46-48, a router storing eligibility for rerouting that is based on QoS, which is based upon the destination address. It would have been obvious to one skilled in the art at the time of the invention to base eligibility for rerouting on QOS in the system of Masuda. The motivation would be to reroute higher priority traffic first, to ensure its particular guaranteed QoS. Said switch operated based upon congestion occurring only in the router is not specifically disclosed in Masuda or Rochberger. However, Masuda does disclose monitoring output port congestion status (which would be congestion occurring within the switch) in column 5, lines 52-54. Further, Applicant discloses in paragraph 5 of the instant specification that there is a direct relationship between congestion outside the router and congestion in the router; congestion outside the router causes the transmit buffer on that link to back up and eventually become full.

It would have been obvious to one skilled in the art at the time of the invention to operate the switch based upon congestion occurring in the router. The motivation would be to use the congestion information collected by Masuda to optimally route packets to avoid the congested port and links.

Regarding claim 20, a congestion detector for further detecting when the level of congestion has abated is disclosed in Masuda, figure 1, element 14. A processor switching data packets comprising the eligible address from the overflow path back to the primary path for the destination address is disclosed in figure 1, element 11 and column 5, lines 46-47 (the path selection unit switches the optimum path on a real time basis, so that when the congestion status monitor detects that congestion has abated, the path selection unit will switch back to the original optimum path).

Regarding claim 21, a memory for storing a forwarding table in the router is disclosed in Masuda, figure 1, elements 131 and 132. The forwarding table having entries respectively corresponding to destination addresses in the network and identifying at least two output paths from the router for at least one of the destination addresses to enable overflow routing, one of the at least two output paths being identified as a corresponding primary path and other of the at least two output paths being identified as overflow paths is not specifically disclosed in Masuda. However, the H/W table of Masuda holds whichever optimum path has been selected based on the instant congestion levels, sometimes it will be the usual optimum path, sometimes it will be another path, depending on the current congestion status in the network. See Masuda, column 8, lines 4-7. it would have been obvious to one skilled in the art at the

time of the invention to have a table holding all of the possible primary and backup paths that are used in Masuda. The motivation would be to compile the primary and overflow path data in one place.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia L. Davis whose telephone number is (571) 272-3117. The examiner can normally be reached on 8:30 to 6, Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CLD
1/18/2005 CLD 1/18/05

HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600